

# PATENT SPECIFICATION

1,078,588

DRAWINGS ATTACHED.

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## COMPLETE SPECIFICATION.

### Urine Collector.

We, HOLLISTER INCORPORATED, a corporation organised under the laws of the State of Illinois, United States of America, of 833 North Orleans Street, Chicago, Illinois, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a urine collector and more particularly to a device readily attachable to the body of a human for the purpose of collecting urine and retaining the same without danger of spilling.

Urine collectors are needed under a large number of circumstances. In some cases a physical incapacity to retain urine has necessitated that a person so afflicted wear some sort of bag to collect and retain the urine for subsequent disposal. While the urine collector of the present invention is useful under such circumstances, it finds its particular advantage in the pediatric field for providing urine specimens of infants who, while capable of retaining urine, are incapable of understanding the necessity of retaining the same until a suitable receptacle can be provided. On the other hand, if a receptacle suitable for collecting urine samples is provided, the infant has no way of knowing what is expected of it and may not co-operate. The urine collector of the present invention can be used to advantage under such circumstances.

According to the present invention there is provided a urine collector comprising outer and inner liquidproof bags, the outer bag being formed from a tube the ends of which are closed to form said bag, the bags having co-operating openings for receiving urine from a user of the collector, opposed portions of the bags surrounding the open-

ings being connected together, and means for providing urine communication between the bags, the arrangement being such that, in use of the collector, urine can flow from the inner bag to the outer bag but urine flow in the reverse direction is restricted, or prevented.

The invention will be more readily understood from the following description of an embodiment thereof, given by way of example only, reference being made to the accompanying drawings wherein:—

Figure 1 is a side elevational view of an embodiment of the invention;

Figure 2 is a vertical section taken along line 2—2 of Figure 1;

Figure 3 is a vertical section taken along line 3—3 of Figure 1;

Figure 4 is a horizontal section showing the device in applied position; and

Figure 5 is a horizontal section taken along line 5—5 of Figure 1.

Referring to the drawings, the urine collector there illustrated comprises a tube of plastic 100 sealed along its bottom edge 101 and at its top edge 102. Located within the tube 100 is a second tube 103 sealed at its upper edge along the line 102. The bottom edge of the inner tube 103 is sealed as indicated at 104.

The outer and inner tubes 100 and 103 are each provided with coincident openings 105 with the edge of the opening of the outer tube 100 being sealed to the edge of the inner tube 103. Surrounding the opening is attachment means in the form of adhesive-bearing material 106 having a peel strip 107 normally covering the adhesive but removable therefrom as shown. The material 106 is sealed to the outer bag 100 only along an area surrounding the opening 105, such area being indicated at 111, thus leaving the portion of the adhesive bearing

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material 106 outwardly of the area 111 free of attachment to the outer tube.

The inner tube 103 is provided with a plurality of U-shaped slits 108 which operate as one-way, or substantially one-way, valves, to allow flow in one direction but to prevent, or restrict, flow in the reverse direction. In use, the peel strip 107 is removed to expose the adhesive on the outer surface of the adhesive-bearing material 106 and the appliance is placed against the body as shown in Fig. 4. Excreted urine is received first in the inner bag 103 and then passes through the valve-forming slits 108 into the lower bag. Backflow of urine is prohibited, or restricted, by the nature of the valves 108 and thus is retained for future study and test.

The outer tube 100 is provided with an opening 109 therein, sealed shut by a plastic patch 110. To empty the bag it is thus merely necessary to peel off the patch 110 thereby exposing the hole 109.

One advantage of this collector is the simplicity of construction, the same being made of two pieces of tubular plastic sealed at their tops and bottoms to provide closed containers with the seal along the top of each being coincident so as to secure the inner tube in position with the outer tube. The two tubes are also secured together at their openings to prevent leakage at this point.

The adhesive-bearing material previously referred to need be secured to the bag only around the edges of the opening, and the balance of the material may be free of attachment to the bag. For a collector suitable for a female person, it may be advantageous to leave all but that part of the adhesive-bearing material immediately surrounding the opening free of attachment to the bag.

From the foregoing it will be appreciated that there is disclosed herein a new and improved urine collector. It will also be appreciated that there is disclosed a disposable urine collector particularly adaptable for use with male and female infants.

#### WHAT WE CLAIM IS:—

1. A urine collector comprising outer and inner liquidproof bags, the outer bag being formed from a tube the ends of which are closed to form said bag, the bags having co-operating openings for receiving urine from a user of the collector, opposed portions of the bags surrounding the open-

ings being connected together, and means for providing urine communication between the bags, the arrangement being such that, in use of the collector, urine can flow from the inner bag to the outer bag but urine flow in the reverse direction is restricted, or prevented.

2. A urine collector according to claim 1, wherein the inner bag is secured to an end of the outer bag.

3. A urine collector according to claim 1 or claim 2 including means secured to the outer bag for fastening the collector to a user's body.

4. A urine collector according to claim 3, wherein the fastening means comprises adhesive-bearing material surrounding the opening of the outer bag and having an aperture so that urine can enter the collector by way of the aperture and the openings of the outer and inner bags, said material being secured to an exterior surface portion of the outer bag around the perimeter of the outer bag opening, there being a balance of said material free of attachment to the bag.

5. A urine collector according to claim 4, wherein said material has a pair of ears extending generally away from the outer bag opening and being unattached to the outer bag.

6. A urine collector according to claim 4 or claim 5 including a peel patch detachably covering said material.

7. A urine collector according to any one of claims 4 to 6, wherein each of the openings of the bags is in an edge of the bag, and wherein the adhesive-bearing material is folded back on either side of the edge of the outer bag.

8. A urine collector according to any one of the preceding claims, wherein the communication means comprises a U-shaped slit.

9. A urine collector according to any one of the preceding claims including means for allowing the outer bag to be emptied of urine.

10. A urine collector substantially as herein described with reference to the accompanying drawings.

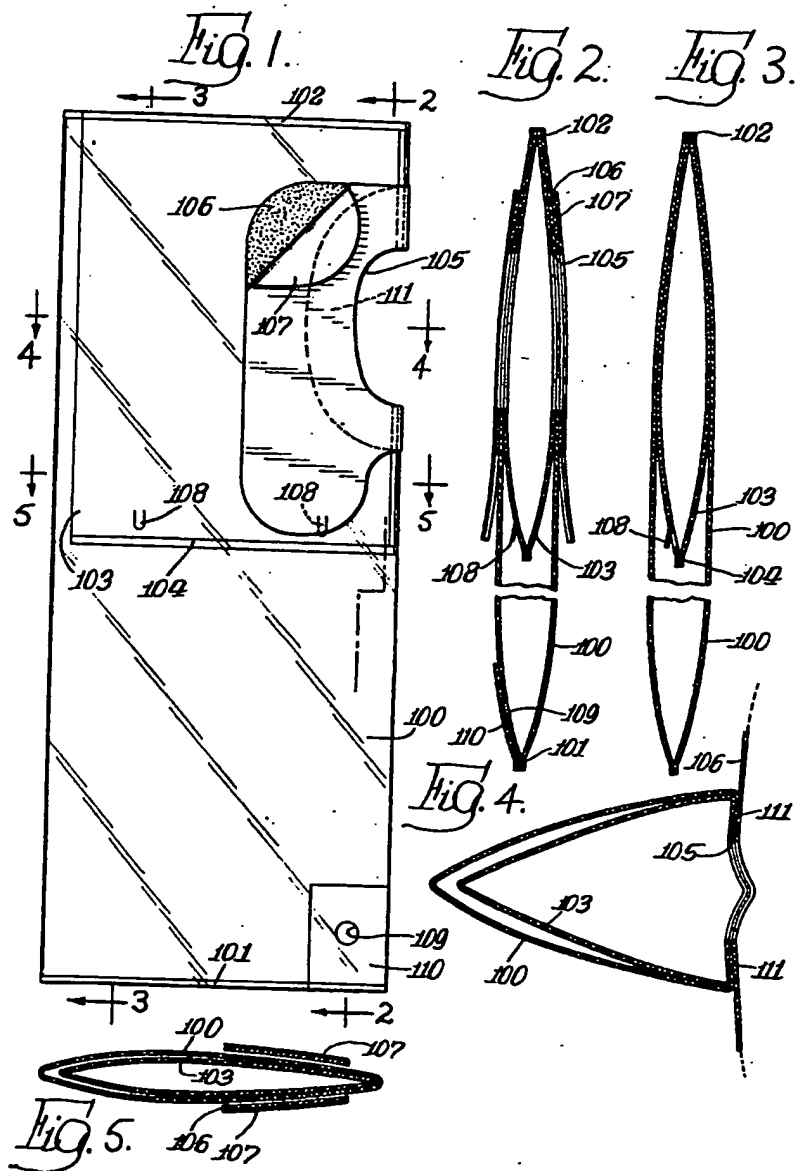
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COMPLETE SPECIFICATION

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